

## Using Hybrid Peer–Mentoring in the Curriculum Course to Develop EFL Student Teachers’ Curricular Knowledge and Digital Literacy

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### **Abstract**

The aim of the current study was to identify the effect of using hybrid peer–mentoring in the Curriculum course to develop EFL student teachers’ curricular knowledge and digital literacy. The participants of the study were 68 fourth year EFL student teachers at the Faculty of Education, Minia University. The quasi–experimental design was adopted with one group serving as the treatment group while the other serving as the non–treatment group. They participated in the field study which took place in the first term of the academic year 2020/2021. Three instruments were used to collect quantitative data to measure the effect of hybrid peer–mentoring training: a curricular knowledge test, a digital literacy test, and a digital literacy questionnaire. In addition, self–reports provided qualitative evidence to support the data from the tests and questionnaire. The findings of the study revealed statistically–significant differences due to the training favoring the treatment group in the post–tests of curricular knowledge and digital literacy as well as the digital literacy questionnaire. The qualitative results were in alignment with the quantitative evidence and shed more light on the value of

hybrid peer–mentoring in developing the participants’ curricular knowledge and digital literacy. These findings indicate the positive impact of hybrid peer–mentoring in developing EFL student teachers’ curricular knowledge and digital literacy.

**Key words**

Hybrid learning, Peer mentoring, Curricular knowledge, Digital literacy, EFL student teachers

## استخدام إرشاد الأقران الهجين في مقرر المناهج لتنمية المعرفة بالمناهج والتنور الرقمي لدى الطلاب المعلمين تخصص لغة إنجليزية كلغة أجنبية

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### مستخلص:

هدفت الدراسة إلى التعرف على أثر استخدام إرشاد الأقران الهجين من خلال مقرر المناهج لطلاب الفرقة الرابعة بكلية التربية على تنمية المعرفة بالمناهج والتنور الرقمي لدى الطلاب المعلمين (تخصص اللغة الإنجليزية). وتكونت عينة الدراسة من (68) من الطلاب المعلمين بكلية التربية جامعة المنيا. وتم استخدام التصميم شبه التجريبي حيث تم تقسيم عينة الدراسة إلى مجموعتين متكافئتين أحدهما تجريبية والأخرى ضابطة شاركوا في الدراسة خلال الفصل الدراسي الأول من العام الجامعي 2021/2020 م. وتم استخدام مجموعة من الأدوات لقياس أثر التدريب اشتملت على اختبار المعرفة بالمناهج واختبار التنور الرقمي واستبيان التنور الرقمي والتقارير الذاتي. ومن خلال تحليل البيانات الكمية والكيفية، توصلت الدراسة إلى الأثر الإيجابي للتدريب باستخدام إرشاد الأقران الهجين حيث وجدت فروق ذات دلالة إحصائية بين متوسطات درجات طلاب المجموعتين في الاختبار البعدي للمعرفة بالمناهج والتنور الرقمي وكذلك استبيان التنور الرقمي لصالح أفراد المجموعة التجريبية، وأكدت النتائج الكيفية ما تم التوصل إليه من خلال نتائج الاختبارات والاستبيان، وبذلك تشير النتائج إلى الأثر الإيجابي لإرشاد الأقران الهجين في تنمية المعرفة بالمناهج والتنور الرقمي لدى الطلاب المعلمين ما يستوجب الاهتمام بهذا النوع من التدريب وإدراجه ضمن استراتيجيات التدريب ببرامج إعداد المعلم قبل الخدمة والتنمية المهنية للمعلمين أثناء الخدمة.

الكلمات المفتاحية: التعلم الهجين - إرشاد الأقران - المعرفة بالمناهج - التنور الرقمي - الطلاب المعلمين (تخصص لغة إنجليزية)

## Introduction

The primary task of teaching is to design effective learning experiences for students. This can be achieved partly through the curriculum, which is a major component in the teaching and learning process. Therefore, teachers need knowledge of the content to be taught, knowledge of a variety of ways in which that content may be presented, represented, and experienced, i.e. knowledge of curriculum. It is believed that the EFL curriculum is not a rigid concept. It is flexible and dynamic that does not only inform practice, but can be informed and shaped by it. This conceptualization of curricular knowledge is based on the argument that various notions and approaches to curricular knowledge exist.

Pinar (2012) highlights the need for broadening student teachers’ notions of curriculum beyond conventional visions of learning in schools to include not only instructional materials but also the forms of experience that those materials hope to mediate. Similarly, Greenstein & Olmanson (2017) agree that while the goals–objectives–instruction–assessment approach to curriculum and teaching is the most prevalent, alternatives exist. Land & Drake (2014) suggest a set of practices including reading, evaluating, and adapting curriculum materials as a starting point for developing a clearer understanding of curriculum knowledge.

Another alternative approach to curriculum knowledge is suggested by Shaver (2003) who maintains that teachers approach the curriculum in different ways: (1) as curriculum– transmitters, (2)

curriculum–developers, or (3) curriculum– makers. According to Shaver et al. (2009), when teachers approach the curriculum as transmitters, curriculum knowledge does not differ much from a fidelity approach, where curriculum knowledge is defined for teachers from the outside. This means that any curriculum change starts from the center to the periphery, whereas a teacher’s role is restricted to delivering curriculum according to specific instructions. However, the adaptation approach differs as it involves changes and adjustments that teachers make. Accordingly, curriculum change is no longer linear, as teachers can adapt the curriculum. The teachers become active because they adapt the curriculum to their own contexts. Thus, curriculum knowledge becomes an ongoing process of construction rather than a product.

Shaver et al. (2009) further examined student–related factors which led teachers to supplement, adapt, or change the official curriculum to match students’ characteristics. They found that the teachers’ curricular knowledge had an impact on the way students interacted with the learning material that results in the actual curriculum students absorbed. Accordingly, learner–directed motives, particularly student schematic, affective, pragmatic, and subject–content needs had significantly driven EFL teachers to implement various curricula. The results of their study indicated positive relationships between learner–directed motives and the teacher curriculum–developer and curriculum–maker’s approaches. In contrast, negative relationships between learner–directed motives and the teacher curriculum–transmitter’s approach were established.

It is, thus, argued, in the current study, that the EFL teacher education programs can play a vital role in introducing alternative approaches to the curriculum to help EFL preservice teachers’ develop curricular knowledge which takes into account the inevitability of adaptation and change. In today’s teaching settings, with the widespread of digital learning resources inside and outside classrooms, any teacher cannot afford to be a mere transmitter of content material. Recent teaching methods in the EFL classrooms at all educational levels encourage teachers to be flexible and open to change and develop relevant literacies that enable them to cope with transformations in curricula. One of these literacies is digital literacy which is inherently linked to the use of learning materials and resources as part and parcel of curricular knowledge.

Digital literacy has become one of the core competencies EFL teachers need due to the widespread of Computer Assisted Language Learning (CALL). According to Son et al. (2011), ‘Language teachers are required to build their knowledge and skills for using computers and improve their competency in doing various types of CALL activities’ (p.26). It is also claimed that the use of technology has become more effective for language teaching than traditional delivery (Garrett, 2009). Cote & Milliner (2018) highlight the lack of digital training in English teacher education programs and call for contemporary English teachers to have strong digital literacy skills. Accordingly, they, particularly, have limited knowledge and confidence using certain digital aspects including (1) sound recording and editing tools, (2) website design, (3) online

video conferencing, (4) online discussions, (5) wikis, and (6) blog applications. Similarly, Son et al. (2011) found that Indonesian English teachers lacked a number of core digital competencies. In another study, Ng (2012) found that students were generally able to use unfamiliar technologies with ease but many of them did not use online tools for educational purposes.

Given that digital literacy has several applications for language learning (Godwin–Jones, 2016), digital transformation is not an option; it has become a must and a matter of personal and institutional survival. Son et al. (2017) highlight that language learners need to be given practical guidelines to learn which digital tools and resources are available and how to find and use them for language learning. By improving their digital literacy skills, language learners would become effective and independent taking advantage of the tools and resources for language learning in authentic contexts. The need for enhancing digital literacy for EFL teachers is also underscored by Quora (2017) who argues that EFL teachers need to be supported in mastering the competencies that ensure positive learning outcomes for students including successfully aligning technologies with content and pedagogy and developing the ability to creatively use technologies to meet specific learning needs.

Various definitions were given in previous literature for digital literacy. Hague and Payton (2010) state that, “To be digitally literate is to have access to a broad range of practices and cultural resources that you are able to apply to digital tools. It is the ability to make and share

meaning in different modes and formats; to create, collaborate and communicate effectively and to understand how and when digital technologies can best be used to support these processes” (p. 2). Son et al. (2011) defined the concept as “the ability to use computers at an adequate level for creation, communication and collaboration in a literate society” (p. 27). For them, EFL digital literacy consists of knowledge, skills and attitudes related to the use of computers and the internet in EFL learning and teaching. They also list various components of digital literacy including (1) knowledge and skills for using general computer applications, (2) language–specific software programs and Internet tools, (3) technical vocabulary, (4) components of a computer, (5) concepts of data and programs, (6) ways of working on files, documents and pictures, and (7) working with multimedia, evaluating resources and communicating with others online.

Another definition of digital literacy is given by Ferrari (2012) who state that ‘Being digitally literate implies the ability to understand media (as most media have been/are being digitalized), to search and being critical about retrievable information (with the widespread of the Internet) and to be able to communicate with others through a variety of digital tools and applications (mobile, Internet)’ (p. 16). Furthermore, Dudeney et al. (2014) considers digital literacy as the ability to make use of technologies at one’s disposal. Son (2015) states that “Digital literacy is the ability to use digital technologies at an adequate level for creation, communication, collaboration, and information search and evaluation in a digital society. It involves the development of knowledge and skills for

using digital devices and tools for specific purposes” (para. 1). Son’s (2015) five elements of digital literacy include: information search and evaluation; creation; communication; collaboration; and online safety. In the current study, digital literacy is defined as having knowledge, skills and attitudes to be able to use digital devices, software applications and the internet in EFL learning and teaching.

### **Hybrid peer–mentoring**

In recent years, classroom instructional mentoring has slowly been replacing traditional forms of teacher training and one–stop workshops (Vikaraman et al., 2017). The aim is also to reduce financial constraints in organizing loads of teacher training programs, which finally goes to waste as it does not cater to what individually a teacher needs to improve or to be mentored on. Mentoring has a long history of success, beginning with Odysseus’ decision to entrust the education and development of his son to a wise and learned man named Mentor, 3,500 years ago. According to Buzzard (2003), mentoring has a number of distinctive characteristics including: First, it is an intentional process. Second, it is a nurturing process that fosters the growth and development of the protégé towards full maturity. Third, it is an insightful process in which the wisdom of the mentor is acquired and applied by the protégé. Fourth, it is a supportive, protective process. Finally, role modeling is also a central quality of mentoring. According to Vikaraman et al. (2017), mentoring is different from coaching as the former involves providing professional and personal guidance to an assigned mentee. Coaching involves providing focused career assistance to a

coachee. In short, mentoring is relationship oriented and coaching is task orientated. Coaching is a subset of mentoring.

Although mentoring is viewed as one of the useful forms of teacher training, few formal structures have made use of peers as a valuable source of support (Valencia et al., 2009). Many mentors recognize their position more as an advisor and imperator, who gives instructions and suggestions on teaching practice, than as an encourager of reflection on concrete thoughts and actions in the classroom (Van Ginkel et al., 2005). Similarly, Crasborn et al., (2010) argue that mentor teachers do not always succeed in finding an adequate combination of offering emotional support and task assistance that is considered as an adequate mentoring by pre-service teachers. In a classic mentoring context, Liu (2014) found that mentors implemented practice-oriented and technique-oriented skills in mentoring more than person-oriented support for pre-service teachers. Therefore the use of peer mentoring in the current study could be a step forward to make a balance of the kinds of mentoring support provided to mentors.

Nguyen (2013) argues that the integration of a formal peer mentoring program can have an impact on the psychosocial support student teachers receive from their peers. There is, therefore, a need to provide pre-service teachers with consistent opportunities and a well-organized structure to allow them to work collaboratively with each other, and that this could develop more mutual support. Nguyen (2013) states that 'if preservice teachers were involved in a well-structured

scheme in which they could mentor each other, it would provide them with extra support from critical friends. This type of support is critical in enhancing preservice EFL teachers’ positive experiences’ (p.41).

Buzzard (2003) assumes that instead of offering advice to colleagues after observing them teach, student teachers may learn from one another while planning instruction, developing support materials, watching one another work with students, and thinking together about the impact of their behaviour on their students' learning. Self-development is more likely to be successful with the support of other people. The process of mentoring offers that support by providing individuals with someone who can share, discuss, question, challenge, give feedback and guide one through the learning cycle.

Buzzard (2003) argues that peer–mentoring helps learners reach their proximal development and accelerate the pace of their learning. Accordingly, the learner accomplishes something that would not have been achievable alone through bridging the gap between the learner’s actual development and his or her potential level of development with assistance from another. Likewise, Nguyen (2013) highlights the notion that creating a friendly and supportive environment where pre–service teachers can work together could provide a support mechanism which would allow them to express themselves without fear of being judged.

It is argued that a well–founded, appropriately structured and continually supported peer–mentor scheme can make a contribution to the professional lives of teachers because access to a mentor can increase a sense of well–being and bring a reduction in negative

stresses providing the teachers with a challenging enhancement of their own professional identity (Buzzard, 2003). She gives the following reasons for the usefulness of peer mentoring: (1) helping establish a line of communication between colleagues, (2) providing a chance to think and talk about lessons, (3) helping bring techniques used instinctively to the conscious level, thus improving the chance they will be repeated, (4) increasing the amount of time spent on discussing instructional matters, (5) providing feedback from peers, (6) improving teaching skills of mentors since they often learn as much or more by observing than by being observed, and (7) improving the skills of analysis, challenge and articulation of pedagogy which extends and enhances professionalism.

It is argued that working together enables pre–service teachers to provide each other with psychosocial support (Goodnough et al., 2009). Villani (2002) highlights that one way mentors can support is by providing emotional support and encouragement. Effective mentors provide their mentees with emotional and psychological support, and make them feel welcome, accepted and included (Rippon & Martin, 2006). Rajuan, et al. (2007) indicated three main areas of perceived mentoring support: 1). person–oriented, which includes the creation of trust and safety; 2). practice–oriented, including information sharing about pupils and ways to make lessons more interesting; and 3). technique–oriented, including specific skills about lesson planning and classroom management.

According to Nguyen (2013), talking with peers was one of the dimensions of the peer mentoring process. It was a means of psychosocial support as well as a source of internal group support. Besides, instructional talk (on–task talk) in the peer–mentored group was a mirror through which pre–service teachers could view their practice and develop their confidence. This is in alignment with Miller’s (2008) recommendation on the potential value of creating a context in which pre–service teachers can learn from and support each other while engaged in talk. Nguyen (2013) further examined the effect of a reciprocal peer–mentoring model which tended to be more equal than the classical peer mentoring model where students are paired with more advanced ones. She found that peer mentoring played an important role in providing the participants with psychological and social support.

In terms of relationships between mentor teachers and pre–service teachers, Liu (2014) found that most mentors recognized that the relationship of both tends to be partners rather than master–apprentice. This finding supports the use of the peer mentoring model in the current study with its emphasis on the reciprocal relationship between mentors and mentees. Buzzard (2003) highlights that mentors and mentees differ in their levels of interpersonal skill as well as in their styles and paces of learning, and their personal biographies and belief systems, and the powerful images that they bring with them to their training. She further argues that it is important that peers have the opportunity to operate flexibly, continually selecting the roles that will best meet their own and their colleagues’ varying needs.

### **Context of the problem**

Out of personal experience as a teacher trainer at the Faculty of Education, Minia University, the researcher noticed that student teachers in the current study lacked curricular knowledge and had low level of digital literacy. This was confirmed by a pilot study which was carried out on a sample of 60 fourth year EFL student teachers at the Faculty of Education, Minia University before giving the peer–mentoring. Training. A curricular knowledge test and a digital literacy test were administered at the start of the first term of the academic year of 2020/2021. The mean score in the curricular knowledge test was 13.32 out of 40 (33.3%), and that in the digital literacy test was 9.45 out of 30 (31.5%). These means indicate a lack of curricular knowledge and low level of digital literacy among the participants. This is alignment with previous research studies reviewed in the previous section.

### **Aims of the study**

The aim of the current study was to identify the effect of using hybrid peer–mentoring in a curriculum course to develop EFL student teachers’ curricular knowledge and digital literacy. The two main aims of the study are:

- 1– To identify the effect of using hybrid peer–mentoring on developing EFL student teachers’ curricular knowledge.
- 2– To identify the effect of using hybrid peer–mentoring on developing EFL student teachers’ digital literacy.

### **Hypotheses**

Based on the review of previous literature, the following two hypotheses are formulated:

- 1– There is a statistically–significant difference at the level of (0.05) between mean scores obtained by the participants of the treatment and non–treatment groups in the curricular knowledge post–test favoring the treatment group.
- 2– There is a statistically–significant difference at the level of (0.05) between mean scores obtained by the participants of the treatment and non–treatment groups in digital literacy post–test favoring the treatment group.

### **Design**

The quasi–experimental research design was used in the current study. The treatment group was trained by the researcher in the hybrid peer mentoring technique while studying the curriculum course, whereas the non–treatment group was taught the same course using the regular lecture and discussion format. Besides, the descriptive approach was used to report the findings revealed by qualitative data analysis. The use of mixed methods in the current helped in providing a clearer understanding of the role of hybrid peer–mentoring in developing the participants’ curricular knowledge and digital literacy. The quantitative data from tests and questionnaire made an important contribution to the bricolage of information built up during the analysis of the findings. An in–depth understanding was gained from qualitative data using the participants’ self–report responses and reflections.

## Participants

The sample of the study consisted of two groups of fourth year student teachers who were randomly assigned into an treatment group and a non–treatment one (34 student teachers in each group). To ensure the equality of the two groups, the pre–tests of curricular knowledge and digital literacy were administered before the start of the peer–mentoring training. The findings of the pretests revealed no significant differences between the two groups in the curricular knowledge test with a significance value (.910) and the digital literacy test with a significance value (.507). It is worth noting that 10 out of the 34 participants in the treatment group were supervised by the researcher during the practicum course and participated in providing part of the qualitative evidence reported in the current study. The rest of the qualitative evidence was collected from other participants in the treatment group as they responded to the assignments required throughout the course and training.

Fourth year EFL majors at the Faculty of Education were selected to participate because they had previous teaching experience during the practicum course, yet needed to sharpen their skills of providing feedback to their peers. They needed to do so in a friendly atmosphere because of two reasons. First, they – as student teachers – did not have enough articulate knowledge about teaching and learning to enable them to provide a sound critical appraisal of the practice of teaching. Second, they attended to their classmates’ lessons during practicum and provided them with feedback, usually in person.

## **Instructor**

The researcher was the instructor of the two study groups. Buzzard (2003) identified three roles of the instructor while conducting the mentoring training that were: (1) ensuring a conforming rather than a critical orientation to the mentor role given that the mentors may confuse the articulation of their personal knowledge with the process of critically appraising sound teaching practices, (2) ensuring that some level of challenge is existing in a mentoring session for intellectual growth to take place, and (3) modifying mentor and mentee’s simplistic views about learning to teach compared to existing theories and literature. In order to facilitate growth and provide support, mentors need to have well formulated ideas on how teachers develop professionally.

## **Training material and techniques**

The experiment was carried out while teaching the curriculum course, which is part of the program of preparing preparatory and secondary school EFL student teachers at the Faculty of Education, Minia University. The course is taught for two hours every week during the first term to fourth–year students. Both the treatment and non–treatment groups studied the course with the same topics and course material. However, the treatment group was given the course using peer–mentoring during the face–to–face sessions and the online ones, whereas the non–treatment group was taught the course through the more conventional lecture and discussion format without the hybrid peer–mentoring training.

## **Instruments**

Four instruments were used to measure the effect of hybrid peer–mentoring on the development of curricular knowledge and digital literacy among the participants of the study sample. These instruments were: (1) the curricular knowledge test, (2) the digital literacy test, (3) the digital literacy questionnaire, and (4) self–report about the value of the peer–mentoring training and its role in developing curricular knowledge and digital literacy. The aim of these instruments was to yield both quantitative and qualitative data to test the study hypotheses and to have qualitative evidence to shed more light on the findings obtained the tests and questionnaire.

The curricular knowledge test was used to measure the participants’ curricular knowledge. It was designed by the researcher based on reviewing the literature relevant to EFL student teachers’ knowledge of curriculum in similar contexts. The test consists 40 questions in two parts. The first part consists of 15 multiple choice questions and the second part consists of 25 true or false questions. The questions focus on knowledge of curriculum related to material design, content organization, learning, teaching and assessment activities. The questions were formulated taking into consideration the recent trends in curriculum theory and the view to curriculum as a system of interrelated components. To check the validity of the test, it was checked by 5 experts in TEFL. Based on the feedback received from the panel of experts, the test was modified and the final version was reached (See Appendix 1).

The digital literacy test was designed by the researcher to measure the participants’ digital literacy knowledge as part of their digital literacy. It consists of 30 multiple choice items which measure the participants’ digital knowledge in relation to EFL learning and teaching. The items were designed in light of previous research studies dealing with digital literacy competencies of EFL majors and student teachers. To check the validity of the test, it was checked by 5 experts in TEFL. Based on the feedback received from the panel of experts, the test was modified and the final version was reached (See Appendix 2).

In addition to the digital literacy test, a digital literacy questionnaire was used to measure the participants’ development of digital literacy. The digital literacy questionnaire was adapted from Son et al. (2017) who originally designed the digital literacy questionnaire as useful tool in understanding the participants’ awareness and use of digital technologies and their attitudes toward the use of these technologies for language learning. The adapted questionnaire (See Appendix 3) consists of 45 items in 5 parts. The first part consists of 10 yes–no questions asking about the participants’ beliefs about digital literacy. The second part consists of 10 Likert scale items to measure the frequency of using certain digital tools in EFL learning and teaching. The third part consists of 5 items to identify the factors affecting the use of digital technologies for language learning. The participants had to decide which factors applied to them. The fourth part consisted of 10 Likert scale items to measure the participants’ digital literacy skills. The participants had to rate themselves in terms of three options: (good),

(acceptable), and (poor). The fifth part consists of 10 items to measure the participants’ attitudes towards digital literacy. The Alpha Cronbach reliability check of the adapted version of the questionnaire was found to be (.909), which indicates that the questionnaire is very reliable.

Self–reports was also used to obtain qualitative evidence to measure the value of hybrid peer–mentoring in the development of the participants’ curricular knowledge and digital literacy as well as the relevance of curricular knowledge to the practicum component of the teacher education program that the members of the study sample were participating in. The self–reports represented the participants’ responses to assignment questions, discussion forums, and school–visit–reports submitted throughout the duration of the experiment. They were submitted through the *Google Classroom platform*. The received responses were qualitatively analyzed and categorized by the researcher and they were included in the findings section following the quantitative evidence gleaned from the tests and questionnaire.

## **Results**

### **The first hypothesis**

The findings of the study revealed that there was a statistically–significant difference at the level of (0.05) in the post– test of curricular knowledge favoring the treatment group as shown in table (1). Therefore, the first hypothesis is accepted.

**Table (1): The t-test results of the treatment and non-treatment groups in the post-test of curricular knowledge**

	Group	N	Mean	SD	t-value	Df	Sig. (2-tailed)
Post-test	Treatment	34	27.97	5.45	2.085	66	0.041*
	Non-treatment	34	25.17	5.59			

\* Significant at 0.05

**Development of curricular knowledge**

Qualitative evidence gleaned from the participants' responses revealed that they developed various aspects of curricular knowledge and practices as a positive impact of taking the course. The following quotations from the participants commenting on the role of the course in developing their curricular knowledge and practices reveal the positive impact of the course. One of these aspects is the adaptation of teaching methods to suit content. One of the participants mentioned:

*I became flexible in changing the method of explanation to be suitable for the content to be taught in order to facilitate the students' understanding and grasp of the material.*

Adapting the content was carried out through representation and simplification of materials as highlighted in the following quotation from one of the participants:

*The curriculum course helped me become aware of the individual differences among students and choose the best way to evaluate the achievement of learning objectives. It also helped me know that I can represent or simplify the content to suit the needs of slow learners.*

It was also revealed that the participants exhibited change in the conception of the curriculum. One of the participants stated:

*Studying the curriculum course made me look at the syllabus that I teach in a different way as consisting of various linked components such as the learning objective, content, teaching and learning activities, evaluation techniques and learning resources.*

The participants were responsive to their students’ needs by judging whether the curriculum is suitable or not. One participant emphasized:

*I learned that while I was planning for teaching, I should have been aware of the lesson content and read it in a critical way to see if it was suitable for my students’ level and needs or not.*

Another participant highlighted the need to divert from the lesson plan to meet the students’ needs:

*Studying the curriculum course helped me understand that I don’t have to follow my plan to the letter. I can slow down when needed. I can also enrich my students’ learning with additional activities or material. For example, while teaching EFL reading, I gave extra time for some students who could not read and answer comprehension questions at the same rate as other students. They needed more time to read the materials well. I also made them read the passage in parts not all of it at once. Additionally, I made them start by reading another reading passage covering the same content in simpler*

*language to give them some background information. Then, when they read the passage in the textbook, they could cope with others building on their prior knowledge.*

**The second hypothesis**

The findings of the study revealed that there was a statistically-significant difference at the level of (0.05) in the post- test of digital literacy favoring the treatment group as shown in table (2). Therefore, the second hypothesis is accepted.

**Table (2): The t-test results of the treatment and non-treatment groups in the post-test of digital literacy**

	Group	N	Mean	SD	t-value	Df	Sig. (2-tailed)
Post-test	Treatment	34	18.38	2.26	2.470	66	0.016*
	Non-treatment	34	16.70	3.24			

\* Significant at 0.05

In addition, the administration of the digital literacy questionnaire at the end of the experiment confirmed these results as indicated in table (3) below.

**Table (3): The t-test results of the treatment and non-treatment groups in the digital literacy questionnaire**

	Group	N	Mean	SD	t-value	Df	Sig. (2-tailed)
Post-test	Treatment	34	77.58	9.11	2.362	66	0.021*
	Non-treatment	34	70.08	16.11			

\* Significant at 0.05

### **The development of digital literacy**

This section presents qualitative evidence collected from the participants’ recollections with regard to the role of the course in developing their digital literacy. The participants reported that the course was very useful in enhancing their digital literacy, particularly, in (a) developing their computer and internet skills, (b) pedagogical practices, (c) language learning and teaching practices, (d) personal growth, (e) communicating with students and attending to their needs, and (f) raised awareness of the challenges of using technology in the EFL classroom. According to the participants, the course had a positive impact on developing their computer and internet skills. According to one of the participants:

*The online component of the curriculum course helped me develop my computer skills such as typing and using computer programs such as Microsoft Office. It also helped me develop my skills related to the use of the internet for lifelong learning. I can now join and participate in my favorite discussion groups through the internet.*

The course was also useful in developing the participants’ pedagogical practices. According to one of the participants, the course enabled her to use the internet search to develop curricular material. She stated:

*I can use the internet to collect more information about the lesson I plan to teach to enrich the content and attend to the different needs and learning styles of my students.*

Another participant highlighted the role of PowerPoint presentations in differentiating instruction for students with special needs stating:

*The use of PowerPoint presentation in class enabled me to present the material attractively in a way that enhanced my students’ understanding.*

*Besides, I had a lot of slow learners in class and it was very difficult for them – without the use of PowerPoint presentations – to follow well on what I was presenting.*

A third participant pointed out the role of technology on transforming methods of teaching stating:

*The use of technology transformed how I teach. I can now present my lessons using PowerPoint. I also use videos which I bring from the internet to supplement the lesson content. I also use recorded videos relevant to the topics I teach.*

A fourth participant referred to the use digital tools in teaching and learning tasks stating:

*I found the computer applications such Word Processor and PowerPoint very productive and useful for learning and teaching for carrying out a lot of related tasks such as preparing handouts and assignments as well as digital presentations.*

The course was seen by the participants as useful in enhancing their digital language learning and teaching practices. One of the participants explained how the course helped him in using digital tools for multimodal and authentic learning. He stated:

*I can use the smart board or data show to present photos and videos and to bring the voices of native speakers to the language classroom.*

Another participant listed the various applications of technology in the EFL classroom stating:

*The internet, video conferencing, wikis, online discussion forums, blogs, podcasts, and speech recognition are effective digital tools and applications in the language classroom available for everyone to teach EFL listening, speaking, reading and writing to make a real difference.*

A third participant gave an example of the use of YouTube to learn about and teach grammar stating:

*I found YouTube very useful in expanding my grammar knowledge and how to teach it. I can now search for any grammatical point online and download YouTube videos that explain any grammatical point. I benefited a lot from these videos in leaning about and teaching grammar.*

In addition to improving computer and internet skills, pedagogical practices and language learning and teaching practices, the course was also seen as facilitating personal growth. One of the participants highlighted how technology helped her transform from a struggling situation to adopting a lifelong learning attitude. She stated:

*I had very little computer experience and was not able to complete the assignments online and cope up with my colleagues. I knew I was missing out on digital learning, so I searched YouTube for how to carry out basic digital learning and use online learning platforms. I managed to use Google Classroom well and submitted all my assignments successfully. I plan to continue learning more about technology and attend online courses to develop my skills and know how to use technology in teaching and learning.*

The course was also useful as it enabled the participants to communicate with students and attend to their needs. One of the participants highlighted the role of digital platforms in communicating with students stating:

*I found the use of digital platforms such as Edmodo, Zoom, and Google Classroom very useful in communicating with my students, but it needs a lot of patience and training to get my students get used to them.*

Another participant highlighted the possibility of asynchronous learning through technology stating:

*With the availability of tablets, students learn from home easily. They can even take exams and carry out assignments online.*

In addition to the various above mentioned benefits, the course was also useful in raising the participants’ awareness of the challenges that hindered the optimum use of digital technologies as highlighted by one of the participants who stated:

*I found it difficult to make the most out of technology because of several reasons including: not having a personal computer, the difficulty of determining the best websites to use, lack of knowledge with regard to the use of certain digital technologies, and lack of digital equipment at school.*

#### **The value of peer–mentoring**

Not only did the course improve the participants’ curricular knowledge and digital literacy, but also it developed their positive attitudes towards the role of peer–mentoring in improving their knowledge, skills and attitudes as EFL prospective teachers. The quotations below present the participants’ responses in this regard.

The course proved useful in improving the participants’ sense of mutuality as evident in the following quotation by one of the participants:

*Working together was a perfect way to share ideas, knowledge, and that happened in a very flexible way because we are equal.*

Similarly, another participant highlighted the role of the course in improving her social skills stating:

*Working together breaks the routine of individual work, and also develops our social skills by enhancing the interaction.*

A third participant similarly noted that she got the much needed support while working with a classmate during the mentoring session. She stated:

*While we were preparing for a presentation, we helped one another find the strong and weak points and this helped us become ready for presentation.*

The participants reported being more creative due to their participation in productive discussions. According to one of the participants:

*Working together gave us the opportunity to make a discussion about an idea or topic, and share our ideas and generate lots of ideas about that topic. It also enabled us to learn from each other.*

Other participants reported the usefulness of the peer–mentoring training in improving their language skills. It was stated by one of the participants:

*Working together was a fascinating way to learn from one another. The use of different words to express the same meaning helped us to know a lot of new words and we added them to our vocabulary repertoire. It also helped us to improve our accent speaking English by concentrating on the pronunciation of each other.*

Similarly, another participant who reported the enhancement of her EFL listening and speaking skills stated:

*Working together helped me become a good listener and speak freely.*

The learning environment provided by the peer–mentoring sessions was also welcomed by the participants as providing the participants with both privacy and safety. It was stated:

*Working together gave us a degree of privacy and allowed us to try ideas in a less public forum giving responsibility for learning to us.*

The safe and private peer–mentoring learning environment was also seen as supportive as highlighted in the following quotation by one of the participants:

*Working together is a good activity to encourage us to share ideas and help each other without being embarrassed. We felt secure and working together gave me confidence.*

The peer–mentoring experience was also useful in helping the participants learn from one another as mentioned by one of the participants who stated:

*I think working together was very useful as I felt more comfortable to speak to my classmate who helped me to give more realistic answers and who gave me advice.*

Other benefits of peer mentoring included self–learning and mutual leadership as pointed out in the following quotation by one of the participants who stated:

*Working together helped us learn from one another and become less dependent on the professor. We learned from the mistakes and successes of each other. It gave us more speaking time. It taught us how to lead and be led by someone other than the instructor. There was a great chance of different opinions and ideas to share. It also encouraged cooperation and negotiation skills and promoted self–learning by allowing us to make our own decisions rather than following the teacher’s ones.*

The participants also reported that peer–mentoring was useful in making them goal–oriented, accountable, and active learners. In addition, it added variation and was a trigger for competition. The quotations below highlight these aspects:

*Working together gave us a sense of achievement when we reached our goal.*

*We took up responsibility for our learning.*

*Working together kept us active which increased our ability and desire to learn and provided some variety during the lesson.*

*Working together made us challenge one another. When my classmate gave an idea, I was jealous to give a similar or better one.*

The peer–mentoring experience was seen favorably as improving the participants’ positive attitude and intrinsic motivation. One of the participants stated:

*We did our best to produce work of the best quality to enrich our knowledge, beliefs, attitudes, and thinking.*

The participants started to view their role as educators who can mentor one another to succeed as pairs and individuals. It was stated:

*We saw each other’s weaknesses and helped one another in how to strengthen them.*

*We cultivated our understanding through discussion and explanation to one another.*

## **Discussion**

The findings of the study revealed the positive impact of hybrid peer mentoring on developing treatment group’s curricular knowledge and digital literacy. It is worth noting that the development of the participants’ curricular knowledge as revealed by the quantitative and qualitative evidence is in alignment with previous literature. Shaver et al. (2009) found that curriculum–developers and curriculum–makers were student–directed. They responded to student characteristics through skipping and adapting textbook parts and supplementing topics

and materials. Apart from curriculum–transmitters, the teachers took the roles of facilitators, guides, and resource personnel and considered student differences in their lesson plans.

Specifically, the teachers developed or made the curriculum to address student language, pragmatic, schematic, and affective needs. They acted to address students’ language needs with regard to accuracy, fluency, listening, reading, writing, or speaking. They developed or made curriculum to respond to students’ pragmatic needs, whether academic, vocational, or communicational. They also developed or made curriculum to meet student schematic needs by tailoring content and activities to match student schemas and building on their prior knowledge. The teachers equally developed or made curriculum to address student affective needs in terms of motivation, interests, and content updating. They developed or made curriculum to cater to students’ different learning styles. Obviously, the participants in the treatment group started to view their role as teachers differently. Their view transformed from seeing themselves as curriculum transmitters to curriculum developers who can adapt or even add to the textbook assigned.

The practicum component of the teacher education program in a corner stone in facilitating the mentoring process and in providing space for student teachers to test their knowledge. Liu (2014) highlights that the field–based practicum should establish conditions to make pre–service teachers thoughtful. Crasborn et al. (2010) highlight that mentoring dialogue in field–based practicum is an important strategy for

helping pre-service teachers develop professional knowledge and transform existing teaching practices. Similarly, Knezic et al. (2010) emphasize that the dialogue makes pre-service teachers go beyond their individual frames of reference and makes them consider new conceptions and knowledge about teaching.

Based on the findings revealed by the current study, the researcher posits a model of hybrid peer-mentoring taking into consideration the context of the current study and the participants' needs. Up to the researcher's best knowledge, no model of peer-mentoring EFL pre-service exists to respond to the needs of student teachers to receive professional and personal support during their teacher training program. The gap in literature related to this area encouraged the researcher to construct the current model to fill this gap and provide a tool to support EFL pre-service teachers make the most out of their teacher training and practicum experiences.

The model consists of five dimensions of hybrid peer-mentoring that emerged while analyzing related literature to mentoring EFL student teachers in various programs worldwide. It was modified based on implementing it with the participants during the peer-mentoring training that was carried out as part of the current study. These dimensions are: (1) providing teaching guidance, (2) managing interpersonal interaction, (3) reflecting on practicum experiences, (4) giving support, and (5) the online component. These dimensions are presented in the following sections.

***Providing teaching guidance***

Student teachers have simplistic conceptions about teaching and learning due to lack of experience. They need professional guidance to help them develop professional knowledge that is theoretically–grounded. This was achieved in the current study through discussion with the participants and instructor. The participants were actively engaged in discussing curricular issues and making use of curricular knowledge in teaching practice. This was arranged during the hybrid peer–mentoring training program as the participants worked together in pairs to discuss the assigned materials and activities. To provide a peer–mentoring model for the participants, the instructor modeled in class how to carefully read and analyze curricular materials and further to think what kind of instructional strategies that could be used.

Throughout the training sessions, the participants were reminded that the role of mentor was to act as a sounding board during the peer–mentoring session and to take notes of interesting points to be discussed in the whole class instructor–led discussion and feedback session that followed the peer–mentoring session in the same training session. The whole class instructor–led discussion and feedback session constituted an essential component of every mentoring session because the participants had simplistic views about curricular knowledge compared to existing theories and literature. The goal of the discussion was to relate the participants’ knowledge and experiences to educational theory and best professional practices, and thus, providing

the participants with the needed professional knowledge and guidance while learning to teach.

***Managing interpersonal interaction***

Managing interpersonal interaction is a key skill in the peer–mentoring process. In peer mentoring, the participants interacted in pairs and exchanged roles as a mentor and a mentee. They frequently engaged in talk and discussion with their colleagues. Mastering interpersonal interactions during the peer–mentoring process paved the way for the participants to practise successful communication at practicing schools during practicum. Communication at school is an integral component student teachers need to practise at all levels. The communicative nature of the peer–mentoring training provided the participants with a safe environment to practise interaction with colleagues. Buzzard (2003) highlighted that mentoring meetings gave the participants the ‘right’ to have a professional discussion. Accordingly, it was somehow legitimate to take the time to talk to a colleague professionally if they were part of a mentoring pair.

It is worth noting that peer–mentoring interactions placed the participants’ self–esteem and professional respect on the line, because they exposed how the participants taught, how they thought about teaching, and how they planned for teaching to the scrutiny of their peers. The peer–mentoring process also played a significant role in alleviating insecurity with the participants not really understanding how to go about working with one another. This was achieved by

familiarizing the participants with what was expected from them as mentors and mentees.

Both mentor and mentee roles were clarified to the participants. The mentor had to remember that they were neither responsible for the person they are mentoring, nor for their formal induction. But they could answer questions, fill in the gaps, allay anxieties and give friendly guidance. Instead of offering advice to colleagues, the participants learned from one another while discussing related topics and collaboratively answering the assignments.

The mentors were told that they could play various roles including being: (1) a professional supporter: to encourage the mentee and to listen to them actively with the goal of supporting and reassuring them, (2) a trainer to provide a role model to the mentee in necessary situations and to discuss and identify needs. Being a trainer also meant to help the mentee reflect on their thinking and action, and (3) educator to help set targets, challenge the mentee and to relate theory to practice. It was important to point out to the participants that they had the opportunity to operate flexibly, continually selecting the roles that would best meet their own and their colleagues' varying needs. Some participants found the experience of being listened to, and encouraged to think and talk about their teaching practices a positive step forward in how they felt about teaching, and themselves.

Hall et al. (2008) adds that the role of mentors is often replaced by terms such as guide, advisor, counselor, instructor, sharer, supporter and encourager. Accordingly, mentors can provide not only pedagogical

guidance, emotional support and professional socialization, but also empathy and serve as role models. Vikaraman et al. (2017) further emphasize that mentors play very important role in providing emotional support. They provide the space, care, personal coaching and appropriate settings for mentees to gain knowledge and build strong personalities. The mentoring psychological functions provide the mentee with role modeling, acceptance and confirmation, counseling, and friendship. According to Buzzard (2003), the outcomes of mentoring “point towards an enhanced professional life for those who engage in it. This affirms the capacity of mentorship to act as a catalyst for change in the management of professional life, which, in turn, has a positive inference for the school as a whole” (p. 234).

#### ***Reflecting on practicum experiences***

The dialogue about pre–service teachers’ performance seems to be a good initiative for self–reflection in mentoring. Dialogue between mentors and mentees can help pre–service teachers discuss curricular knowledge and develop teaching practice. Reflecting on practicum, a mentor provides a mentee with space and time to reflect and improve. It is worth noting here that the process of mentoring offers support by providing individuals with someone who can share, discuss, question, challenge, give feedback and guide one through the learning cycle.

Therefore, it is obvious that the hybrid peer–mentoring training had the potential to enable student teachers to learn from field experiences. The peer–mentoring dialogue based on field–based practicum was an important strategy for helping pre–service teachers

reflect on curricular knowledge and develop existing teaching practices through going beyond their individual frames of reference and considering new conceptions and knowledge about teaching.

During the peer–mentoring training, the researcher was the practicum supervisor of a group of students from the study sample. This role facilitated the process of monitoring the effect of hybrid peer–mentoring on the participants’ actual teaching. The practicum group which consisted of ten student teachers was divided into five pairs to serve as the five peer–mentoring practicum groups. They self–selected themselves for the pairs. They were, then, assigned a peer–mentoring activity to write a joint report on their practicum experience. The aim of the activity was to give them space to jointly reflect on the curriculum course and how they made use of it in teaching, adapting/developing or adding to the curriculum they teach at the practicum school. The assignment was given and received online through the Google Classroom platform. The findings reported in the results section revealed the several benefits of the hybrid peer–mentoring training with regard to reflection and its mediating role in facilitating personal growth and development of professional knowledge.

#### ***Giving support***

One of the great benefits of hybrid peer–mentoring is the support the participants receive from each other. Through constant dialogue, during the peer–mentoring sessions and while carrying out the assigned work, the participants opened their hearts to understand the needs of each other. The hybrid peer–mentoring training provided the participants

with the space, care, personal coaching and appropriate settings for mentees to build strong personalities role modeling, acceptance and confirmation, counseling, and friendship.

The peer–mentoring sessions and process were both an impartial sounding board (for reassurance) and confidence–building. A supportive, non–judgmental climate was ensured to explore ideas and attend to each other’s own agenda and help in defining manageable strategies for change and for development. The peer–mentoring sessions and training were meant to provide psychological and social support to the participants through encouraging them to interact, build confidence and overcome their own limitations.

Throughout the training, the researcher always reminded the participants of the aim and nature of peer–mentoring for all participants to feel welcome, accepted and included to help them boost their confidence, enable them to put difficulties into perspective, and increase their morale and sense of achievement during face–to–face peer–mentoring sessions and online interaction after the interruption of university on campus study.

***The online component***

A set of online tools were made use of during the hybrid peer–mentoring training to maximize the participants’ interaction on a peer basis. Given that the training sessions carried out during the COVID–19 pandemic, the training had to be carried out through hybrid delivery. In addition to the face–to–face sessions which lasted for 10 weeks, four online tools were used with the participants of the treatment group to

supplement the face–to–face interaction. These tools were: Google Classroom, Whatsapp group interaction, Zoom video–conferencing and the university Learning Management System (LMS).

Google Classroom allows instructors to create classes, distribute assignments, post announcements, send feedback, and upload course materials for students to view. through the platform, when students turn in their assignments, the instructor as well as peers can highlight the contents of each assignment and provide the learner with instant constructive feedback and evaluate his/her performance. Google Classroom was used to post announcements, materials, and video lectures. It was also used for giving and receiving assignments as well as feedback to individual students and peers. Additionally, through Google Classroom, it was possible to divide the treatment group students into pairs to facilitate online peer mentoring and to encourage peers to interact.

In addition to Google classroom, the participants made use of two other google tools; i.e. Google docs and Google slides. These are two web–based applications which allow for documents and PowerPoint presentations to be written/prepared, edited, and stored online via the platform. Some of the participants used Google docs and Google slides to carry out the assignments. Given that these two tools are linked to their to Google classroom as part of their Google account package, they could immediately work on their assignments with opening an external file.

The Whatsapp group proved to be a very effective tool to interact with the participants as a whole group. As it was instant and handy, the participants preferred it to interact and to ask about the course–related issues. The Whatsapp group enabled the researcher to interact with the students and was also used for group announcements, discussion and feedback. The participants also found it a safer venue to express their ideas and comments freely and to give advice and suggestions.

Other online tools were used throughout the training including: Zoom, a video conferencing platform, and the university LMS. The Zoom video conferencing platform was useful to interact with students during the weeks when there were no face–face lectures. The students found it difficult, at first, to use the online tools and the features provided through them. However, with time, and through the instructor, peer and group’s support, the majority of the students succeeded in using technology for the training purpose. The breakout rooms feature available in Zoom made it possible for every two members in the mentoring groups to work synchronously together online. In addition, the university LMS was used to store the video lectures and provide links to recorded lectures to the students.

The various online tools made it possible for peer–mentoring to extend beyond the face–to–face mentoring sessions. The face–to–face meetings were terminated in the last week of December 2020 because of the University lockdown due to the second wave of COVID–19. However, online communication on a whole group basis and among peers using the above–mentioned online digital tools continued for an

additional two months just before the start of end–of–term exams in the last week of February 2021. For instance, the participants were able to submit assignments through Google Classroom even after the interruption of study caused by the COVID–19 pandemic.

### **Recommendations**

Based on the findings of the current study, it is recommended that:

- Teacher education institutions should include hybrid peer–mentoring as one of the training techniques to student teachers with curriculum development skills at the classroom level in addition to subject, pedagogic and deep curriculum content knowledge as well as digital literacy skills.
- EFL text book designers at the university and pre–university level should include hybrid peer–mentoring as one of the training techniques to carry out the activities related to the development of curricular knowledge and digital literacy.
- The Ministry of Education should consider using hybrid peer–mentoring in professional development programs to provide in–service teachers especially novice teachers with the necessary curricular knowledge and digital literacy skills.
- To respond to contextual demand for digital transformation and digitizing education in Egypt, more provision of digital facilities should be made and more pre–service and in–service teacher training programs should focus on providing teachers with opportunities to learn about practical ways of using the computer and the internet for learning and teaching purposes. These

programs should also focus on training teachers to support each other and to explore a wide range of activities for online integration in the classroom.

### **Suggestions for further research**

Based on the findings of the current study, suggestions for further research include:

- Studying the effect of peer–mentoring during the practicum training on student teachers’ development of mentoring skills and teaching performance.
- Examining the effect of a training program to develop pre–service teachers and in–service teacher mentoring skills.
- Conducting a study which pairs students with more advanced ones to measure the effect of various mentoring models.
- For the effective implementation of digital training for language learning, it is necessary to identify the level of digital literacy of language learners and find out the factors affecting their use of digital applications in local contexts. This could be carried out through an evaluative study of EFL teacher education programs in facilitating digital transformation and providing the necessary skills for the inevitable shift towards digital learning witnessed in the recent time.

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## Appendix (1): The Curricular Knowledge Test

**Part (A) Choose the correct answer from a, b, c, or d and mark it on your answer sheet:**

- 1- "*Educational theories upon which curriculum planning and design are based*" refers to: (a. curriculum philosophy – b. curriculum design – c. curriculum map – d. curriculum content).
- 2- "*A tool which organizes the various curriculum components in an integrated system*" refers to: (a. curriculum philosophy – b. curriculum design – c. curriculum map – d. curriculum content).
- 3- "*Language skills, grammar and vocabulary*" refer to (a. curriculum building – b. curriculum content – c. curriculum evaluation – d. curriculum development).
- 4- Changes in curricula every now and then are due to (a. learners' psychological needs – b. learners' physical development – c. cultural and social variables – d. learners' individual differences).
- 5- Which of the following is not one of curriculum components (a. content – b. teaching methods – c. learning resources – d. feedback).
- 6- ( a. Aims – b. Goals – c. Objectives – d. Visions) refer to long-term general statements that relate to the society's aspirations.
- 7- ( a. Knowledge – b. Analysis – c. Synthesis– d. Evaluation) is a lower order cognitive level in Bloom's taxonomy.
- 8- (a. Knowledge – b. Comprehension– c. Application– d. Analysis) is a higher order thinking level in Bloom's taxonomy.

- 9- "*To mention*" is a verb that can be used with which cognitive level in Bloom's taxonomy (a. knowledge – d. comprehension – c. synthesis – d. application).
- 10- "*Mastery*" is one of the levels of Bloom's (a. cognitive – b. affective– c. psychomotor – d. intellectual) domain.
- 11- Among the criteria of the selection of curriculum content is (a. validity – b. reliability– c. objectivity – d. probability).
- 12- "*The curriculum content should cover the subject area in detail*" refers to (a. depth – b. breadth – c. validity – d. significance).
- 13- "*Warm-up*" is an example of: (a. introductory – b. enrichment – c. concluding – d. specific) activities.
- 14- "*Needs assessment*" is an example of (a. initial – b. formative – c. summative – d. final) evaluation.
- 15- "*A rubric*" is used to measure students' (a. knowledge – b. skills – c. emotions – d. attitudes).

**Part (B) Decide whether each of the following statements is (✓) or (X) and mark your answer in the answer sheet:**

- 1- The old definition of curriculum focuses on learning experiences whether inside or outside school.
- 2- The hidden curriculum is formal and explicit.
- 3- Language learning experiences do not have to be accumulative.
- 4- Differentiated instruction seeks to account for learners' individual differences.

- 5– It is not necessary for curriculum components to interact with one another.
- 6– The relationship among various curriculum components is linear.
- 7– Learning objectives need more time to achieve than aims.
- 8– Goals are derived from lesson objectives.
- 9– Goals are more specific than objectives.
- 10– An example of an educational goal is for learners “*to acquire scientific thinking skills*”.
- 11– A behavioral objective should focus on a learning activity rather than a learning outcome.
- 12– A good example of a behavioral objective is “*to read an article about digital transformation*”.
- 13– “*To understand a reading passage about the theory of relativity*” is a good example of a behavioral objective.
- 14– “Receiving and responding” are two levels of Bloom’s taxonomy of the psychomotor domain.
- 15– There are five levels in Bloom’s taxonomy of the psychomotor domain.
- 16– “*Depth and breadth*” are two criteria of the selection of curriculum content.
- 17– The logical organization of the curriculum content prioritizes the nature of the subject matter to be taught.
- 18– “*Content continuity*” means that the curriculum gets more complex as students move from one grade to an upper one.

- 19- “*Content sequence*” means that new learning experiences build on previous ones.
- 20- The psychological organization of the curriculum content is based mainly on students’ needs and interests.
- 21- While conducting a *brainstorming* session, received ideas should be evaluated immediately.
- 22- One of the principles of *brainstorming* is that quality of ideas generates quantity.
- 23- While using the *jigsaw strategy*, the teacher starts by dividing the class into a number of expert groups.
- 24- There is no room for individual work while conducting the “*think, pair, share*” method.
- 25- The first step in the *problem solving* method is to collect information about the problem.

## Appendix (2): The Digital Literacy Test

Choose the correct answer from a, b, c, or d and mark it on your answer sheet:

- 1- *Microsoft teams, Google Classroom* and *Edmodo* are examples of (**a.** online platforms – **b.** mobile applications – **c.** social networking sites – **d.** software programs).
- 2- Multimedia includes (**a.** videos – **b.** audio content – **c.** real objects – **d.** images).
- 3- A webinar is an alternative title of (**a.** a video-conference – **b.** a web page – **c.** a hypertext – **d.** an online discussion forum).
- 4- Which of the following online tools is not a tool for developing the writing skill (**a.** Twitter – **b.** Wikis – **c.** Blogs – **d.** Facebook).
- 5- Multimodal learning is concerned with (**a.** representations of content – **b.** literary genres – **c.** online applications – **d.** software programs).
- 6- A hyperlink is a component in ( **a.** a lesson plan – **b.** a web page – **c.** an address book – **d.** an audio library).
- 7- Which of the following is not an example of Web 2.0 ( **a.** Facebook – **b.** WhatsApp – **c.** twitter– **d.** Blackboard).
- 8- Which of the following is an example of an LMS (**a.** Blackboard – **b.** Facebook– **c.** Twitter– **d.** WhatsApp).
- 9- An example of a Web 2.0 application is (**a.** Google Classroom – **d.** Edmodo – **c.** Blackboard – **d.** YouTube).
- 10- An example of an LMS is (**a.** Microsoft teams – **b.** YouTube– **c.** Instagram– **d.** Gmail).

- 11- Videoconferencing can be carried out through which one of the following applications (a. Zoom – b. YouTube– c. Gmail – d. Facebook).
- 12- An example of a search engine is (a. Google – b. Gmail – c. PDF – d. Camtasia)
- 13- An example of a video editor is (a. Camtasia – b. Google chrome – c. word processor – d. Photoshop).
- 14- .docx is an the extension of (a. a word file – b. a PDF document – c. an image – d. a video file).
- 15- The extension of a movie file is (a. .mp4 – b. .mp3 – c. .jpg – d. .doc).
- 16- .mp3 is an the extension of (a. an audio file – b. a word document – c. an image – d. a video file).
- 17- Which one of the following files cannot be edited (a. a word document – b. an excel sheet – c. a database – d. a PDF file).
- 18- *Camtasia* is used for (a. videoconferencing – b. making video lectures – c. making slides – d. streaming online videos).
- 19- ( a. ZOOM b.YouTube c. Camtasia d.PowerPoint) is a video online hub.
- 20- *YouTube* is used for (a. videoconferencing – b. making video lectures – c. making slides – d. streaming online videos).
- 21- *Google Chrome* is (a. a web browser – b. a search engine – c. a web page – d. an antivirus application).

- 22- "A web-based application allowing for documents to be written, edited, and stored online." This is the definition of (a. Google Docs – b. Google Classroom – c. Google Forms – d. Google Chrome).
- 23- "A web platform which enables teachers to create, share, and evaluate assignments within a paperless environment." This is the definition of (a. Google Docs – b. Google Classroom – c. Google Forms – d. Google Chrome).
- 24- Surveys can be designed, distributed, collected and analyzed electronically through (a. Google Docs – b. Google Classroom – c. Google Forms – d. Google Chrome).
- 25- ZOOM is used for (a. videoconferencing – b. making video lectures – c. making slides – d. streaming online videos).
- 26- Which one of the following applications is used to produce and share PowerPoint presentations (a. Google Docs – b. Google Classroom – c. Google Slides – d. Google Chrome).
- 27- Which one of the following applications is a video sharing and viewing tool (a. Google Docs – b. Twitter– c. Google Forms – d. YouTube).
- 28- Which one of the following applications is an online educational platform (a. Facebook– b. Twitter– c. Apple Store – d. Google Classroom).
- 29- Which one of the following applications is used for academic networking (a. Instagram – b. LinkedIn – c. Facebook – d. YouTube).
- 30- An alternative online application for Microsoft Excel is (a. Google Docs – b. Google Forms – c. Google Sheets – d. Google Slides).

### Appendix (3): The Digital literacy questionnaire

**Q1. Please respond to each of the following questions by putting a tick ( ✓ ) in the box at the appropriate spot: 'Yes' or 'No'.**

No.	Question	Yes	No
1	Do you have a personal homepage or a personal portfolio on the web?		
2	Do you find it easy to learn something by reading it on the computer screen?		
3	Do you find it easy to learn something by watching it on the computer screen?		
4	Do you feel competent in using digital learning resources?		
5	Do you have mobile apps you use for language learning purposes?		
6	Can you create and update web pages?		
7	Can you take and edit digital photos?		
8	Can you record and edit digital sounds?		
9	Can you record and edit digital videos?		
10	Can you download and use apps on digital devices?		

**Q2. Please indicate your level of frequency of using each of the followings by putting a tick ( ✓ ) in the box at the appropriate spot: 'Frequently', 'Rarely', or 'Never'.**

No	Item	Frequently	Rarely	Never
1	Electronic dictionary			
2	Email			
3	World Wide Web			
4	Graphics software			
5	Language learning software (e.g. CD-ROM)			
6	Video conferencing			

7	Language learning mobile app			
8	Blog			
9	Wiki			
10	Text chatting			

**Q3. What do you think are the factors affecting the use of digital technologies for language learning? Please tick (✓) all that apply.**

No.	Factor	Apply
1	Lack of knowledge and skills of teachers	
2	Lack of training	
3	Lack of supporting resources	
4	Lack of knowledge of students	
5	Lack of facilities	

**Q4. How would you rate your skills for using each of the followings? Please put a tick**

**(✓) in the box at the appropriate spot: 'Good', 'Acceptable', or 'Poor'**

No	Item	Good	Acceptable	Poor
1	Word processing applications (e.g., MS Word)			
2	Presentation applications (e.g., MS PowerPoint)			
3	Learning management systems (e.g., Google classroom)			
4	Social networking services (e.g., Whatsapp)			
5	Blogs (e.g., Blogger)			
6	Wikis			
7	Podcasts (e.g., Apple Podcasts)			
8	Video sharing sites (e.g., YouTube)			
9	Web search engines (e.g., Google)			

10	Photo sharing sites			
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**Q5. Please indicate the extent to which you agree or disagree with the following statements by putting a tick (✓) in the box at the appropriate spot: 'Strongly Agree', 'Agree', 'Disagree' or 'Strongly Disagree'.**

No	Item	Strongly agree	Agree	Disagree	Strongly disagree
1	I enjoy using digital devices.				
2	I feel comfortable using digital devices.				
3	I am aware of various types of digital devices.				
4	I understand what digital literacy is.				
5	I am willing to learn more about digital technologies.				
6	I am interested when others talk about digital technologies.				
7	I feel that I am ahead of my fellow students in using digital technologies.				
8	I think that it is important for me to improve my digital skills.				
9	I think that my learning can be enhanced by using digital tools and resources.				
10	I think that training in technology-enhanced language learning should be included in language education programs.				

*Thank you for completing the questionnaire*

### Appendix (4): Answer Key of the Curricular Knowledge Test and the Digital Literacy Test

#### Answer Key of the Curricular Knowledge Test

Part (A) Choose the correct answer from a, b, c, or d and mark it here:

1	A	6	A	11	A
2	C	7	A	12	A
3	B	8	D	13	A
4	C	9	A	14	A
5	D	10	C	15	B

Part (B) Decide whether each of the statements is (✓) or (✗):

1	✗	6	✗	11	✗	16	✓	21	✗
2	✗	7	✗	12	✗	17	✓	22	✗
3	✗	8	✗	13	✗	18	✓	23	✗
4	✓	9	✗	14	✗	19	✓	24	✗
5	✗	10	✓	15	✗	20	✓	25	✗

#### Answer Key of the Digital Literacy Test

Choose the correct answer from a, b, c, or d:

1	A	6	B	11	A	16	A	21	A	26	C
2	A	7	D	12	A	17	D	22	A	27	D
3	A	8	A	13	A	18	B	23	B	28	D
4	D	9	D	14	A	19	B	24	C	29	B
5	A	10	A	15	A	20	D	25	A	30	C